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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,886	12/04/2003	Nitendra Rajput	JP920030180US1	8810

7590 08/26/2009

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EXAMINER	
COLUCCI, MICHAEL C	
ART UNIT	**PAPER NUMBER**
2626	

MAIL DATE	DELIVERY MODE
08/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/727,886	**Applicant(s)** RAJPUT ET AL.	
	Examiner MICHAEL C. COLUCCI	**Art Unit** 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 06/03/2009 have been fully considered but they are not persuasive.

Argument (page 11 paragraph):

- "Lee fails to teach or suggest determining the probability of said next word that predicts a next word in said first language to replace a word in said at least one other language in said mixed language expression."

Response to argument:

NOTE: Examiner would like to remind Applicant of the following:

"USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023,1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly

as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process."). Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. Toro Co. v. White Consolidated Industries Inc., 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings."). Any special meaning assigned to a term "must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention." Multiform Desiccants Inc. v. Medzam Ltd., 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998). See also MPEP § 2111.01."

Examiner has incorporated Lee to compensate for deficiencies of Bahl, wherein Lee explicitly teaches *determining the probability of said next word that predicts a next word in said first language* to *replace a word in said at least one other language in said mixed language expression.* The teachings of Lee are clearly directed to handling mixed language text and associated translation(s).

Consider that Lee alone gives an example of handling mixed speech, while giving claims their broadest reasonable interpretation in light of the supporting disclosure without importing limitations from the specification into the claims unnecessarily, whereby Lee teaches well known methods that <u>handle mixed-language input by implementing two typing models</u> in the language input architecture, a Chinese typing model and an English typing model, and train each one separately. That is, the Chinese typing model is trained a stream of keyboard input, such as phonetic strings, entered by trainers in the manner described above, and the English typing model is trained on English text entered by English-speaking trainers. The English typing model may be implemented as a combination of:

1. A unigram language model trained on real English inserted in Chinese language texts. <u>This model can handle many frequently used English words, but it cannot predict an unseen English words</u>.

Lee overcomes this downfall by teaching

2. An English spelling model of tri-syllable probabilities. This model should has on-zero probabilities for every 3-syllable sequence, but also generates a higher probability for words that are likely to be English-like. <u>This can be trained from real English words also, and can handle unseen English words</u> (Lee Col. 14 lines 42-65).4

Further, and more explicitly, Lee teaches language conversion when a user inputs more than one language, whereby <u>when a string or sequence of input text is</u>

clearly Chinese Pinyin text, the Chinese typing model returns a much higher probability than the English typing model. Thus, the language input architecture converts the input Pinyin text to the Hanzi text. When a string or sequence of input text is clearly English (e.g., a surname, acronym ("IEEE"), company name ("Microsoft"), technology ("INTERNET"), etc.), the English typing model exhibits a much higher probability than the Chinese typing model. Hence, the architecture converts the input text to English text based on the English typing model. When a string or sequence of input text is ambiguous, the Chinese and English typing models continue to compute probabilities until further context lends more information to disambiguate between Chinese and English. When a string or sequence of input text is not like either Chinese or English, the Chinese typing model is less tolerant than the English typing model. As a result, the English typing model has a higher probability than the Chinese typing model. To illustrate a multi-language conversion, suppose a user inputs a text string "woaiduinternetzazhi", which means "I love to read INTERNET magazines". Upon receiving the initial string "woaidu", the Chinese typing model yields a higher probability than the English typing model and **converts that portion of the input text to "INTERNET [Chinese characters]".** The architecture continues to find the subsequently typed portion "interne" ambiguous until letter "t" is typed. At this point, the English typing model returns a higher probability for "INTERNET" than the Chinese typing model and the language input architecture converts this portion of the input text to "INTERNET". Next, the Chinese typing model exhibits a higher probability for "zazhi"

than the English typing model and the language input architecture **<u>converts that portion of the input text to "[Chinese characters]"</u>** (Lee Col. 15 lines 21-55).

Additionally, as cited in the previous Office Action (04/06/2009), Examiner clearly stated that Lee teaches mutually dependent probability of two language as well as individual probabilities of one language (Lee Col. 9 lines 58-65), wherein the next characters and sequence of words are predicted…"predict the probability of a sequence of words"… (Lee Col. 11 lines 2-17).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Bahl et al., "A tree-based statistical language model for natural language speech recognition" (hereinafter Bahl) in view of Lee et al. US 6848080 B1 (hereinafter Lee).

Re claims 1, 8, and 9, Bahl teaches generating, by a computing device, a monolingual word history in the first language based upon a mixed language word history and using the stored word equivalence probabilities, wherein said mixed language word history comprises words in said first language and words in said at least one other language, and wherein said mixed language word history and said

monolingual word history each comprise a history of previous words in a sentence-based word sequence (Page 1001 Col. 2);

generating monolingual next word hypothesis probabilities (Page 1002 Col. 2) in the first language based upon the monolingual word history (Page 1001 Col. 2), wherein said monolingual next word hypothesis probabilities predict a next word in said word sequence (Page 1006 Col. 1 paragraphs 1-3);

determining a probability of a next word (Page 1002 Col. 2) in a mixed language expression based upon the monolingual next word hypothesis probabilities and the stored word equivalence probabilities (Page 1001 Col. 2), wherein said probability of said next word predicts a next word in said mixed language expression

However, though Bahl teaches single language word prediction, Bahl fails to teach storing word equivalence probabilities relating to words of a first language and words in at least one other language

generating a monolingual word history in the first language based upon a mixed language word history

said probability of said next word predicts a next word in said mixed language expression

predicts a next word in said first language to replace a word in said at least one other language

outputting said next word in said first language to replace a word in said at least one other language in said mixed language expression based upon said determining said probability of said next word

Lee teaches limitations that concerns switching modes between two languages in order to input words from the different language into the same text. It is common, for example, to draft a document in Chinese that includes English words, such as technical terms (e.g., Internet) and terms that are difficult to translate (e.g., acronyms, symbols, surnames, company names, etc.). Conventional word processors require a user to switch modes from one language to the other language when entering the different words. Thus, when a user wants to enter a word from a different language, the user must stop thinking about text input, switch the mode from one language to another, enter the word, and then switch the mode back to the first language. This significantly reduces the user's typing speed and requires the user to shift his/her attention between the text input task and an extraneous control task of changing language modes. Accordingly, there is a need for a "modeless" system that does not require mode switching. To avoid modes, the system should be able to detect the language that is being typed, and then convert the letter sequence to one language or the other, dynamically, on a word-by-word basis (Lee Col. 3 lines 14-35).

Further, Lee teaches a language input architecture converts input strings of phonetic text (e.g., Chinese Pinyin) to an output string of language text (e.g., Chinese Hanzi) in a manner that minimizes typographical errors and conversion errors that occur during conversion from the phonetic text to the language text. The language input architecture may be implemented in a wide variety of areas, including word processing programs, email programs, spreadsheets, browsers, and the like. In one implementation, the language input architecture has a user interface to receive in input

string of characters, symbols, or other text elements. The input string may include phonetic text and non-phonetic text, as well as one or more languages. The user interface allows the user to enter the input text string in a single edit line without switching modes between entry of different text forms or different languages. In this manner, the language input architecture offers modeless entry of multiple languages for user convenience (Lee Col. 4 lines 1-17).

Furthermore, Lee teaches mutually dependent probability of two language as well as individual probabilities of one language (Lee Col. 9 lines 58-65), wherein the next characters and sequence of words are predicted (Lee Col. 11 lines 2-17).

Further, and more explicitly teaches language conversion when a user inputs more than one language, whereby when a string or sequence of input text is clearly Chinese Pinyin text, the Chinese typing model returns a much higher probability than the English typing model. Thus, the language input architecture converts the input Pinyin text to the Hanzi text. When a string or sequence of input text is clearly English (e.g., a surname, acronym ("IEEE"), company name ("Microsoft"), technology ("INTERNET"), etc.), the English typing model exhibits a much higher probability than the Chinese typing model. Hence, the architecture converts the input text to English text based on the English typing model. When a string or sequence of input text is ambiguous, the Chinese and English typing models continue to compute probabilities until further context lends more information to disambiguate between Chinese and English. When a string or sequence of input text is not like either Chinese or English, the Chinese typing model is less tolerant than the English typing model. As a result, the

English typing model has a higher probability than the Chinese typing model. To illustrate a multi-language conversion, suppose a user inputs a text string "woaiduinternetzazhi", which means "I love to read INTERNET magazines". Upon receiving the initial string "woaidu", the Chinese typing model yields a higher probability than the English typing model and converts that portion of the input text to "INTERNET [Chinese characters]". The architecture continues to find the subsequently typed portion "interne" ambiguous until letter "t" is typed. At this point, the English typing model returns a higher probability for "INTERNET" than the Chinese typing model and the language input architecture converts this portion of the input text to "INTERNET". Next, the Chinese typing model exhibits a higher probability for "zazhi" than the English typing model and the language input architecture converts that portion of the input text to “[Chinese characters]” (Lee Col. 15 lines 21-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Bahl to incorporate language modeling, storing word equivalence probabilities relating to words of a first language and words in at least one other language, generating a monolingual word history in the first language based upon a mixed language word history, and a probability of said next word that predicts a next word in said mixed language expression, predicting a next word in said first language to replace a word in said at least one other language and outputting said next word in said first language to replace a word in said at least one other language in said mixed language expression based upon said determining said probability of said next word as taught by Lee to allow for the elimination of user intervention during

language translation, wherein well known word prediction techniques (Lee Col. 11 lines 2-17) can be combined to be applicable to the combination of one language from a mixed language document to accommodate the reader of a document that speaks one language better than another (Lee Col. 3 lines 14-35), wherein two languages can be merged into one of two languages or displayed as a refined combination of two languages upon prediction of word sequences (Lee Col. 15 lines 21-55).

Re claims 2, 10, and 16, Bahl teaches the method as claimed in claim 1, further comprising summing by said computing device products of word equivalence probabilities with respective monolingual next word hypothesis probabilities (Page 1002 Col. 2).

Re claims 3, 11, and 17, Bahl teaches the method as claimed in claim 1, wherein the monolingual next word (Page 1002 Col. 2) hypothesis probability is a statistical language model (Page 1001 Col. 1).

Re claims 4, 12, and 18, Bahl fails to teach the method as claimed in claim 1, further comprising converting by said computing device a mixed language word sequence to a monolingual word sequence using word equivalence probabilities

Lee teaches limitations that concerns switching modes between two languages in order to input words from the different language into the same text. It is common, for example, to draft a document in Chinese that includes English words, such as technical

terms (e.g., Internet) and terms that are difficult to translate (e.g., acronyms, symbols, surnames, company names, etc.). Conventional word processors require a user to switch modes from one language to the other language when entering the different words. Thus, when a user wants to enter a word from a different language, the user must stop thinking about text input, switch the mode from one language to another, enter the word, and then switch the mode back to the first language. This significantly reduces the user's typing speed and requires the user to shift his/her attention between the text input task and an extraneous control task of changing language modes. Accordingly, there is a need for a "modeless" system that does not require mode switching. To avoid modes, the system should be able to detect the language that is being typed, and then convert the letter sequence to one language or the other, dynamically, on a word-by-word basis (Lee Col. 3 lines 14-35).

Further, Lee teaches a language input architecture converts input strings of phonetic text (e.g., Chinese Pinyin) to an output string of language text (e.g., Chinese Hanzi) in a manner that minimizes typographical errors and conversion errors that occur during conversion from the phonetic text to the language text. The language input architecture may be implemented in a wide variety of areas, including word processing programs, email programs, spreadsheets, browsers, and the like. In one implementation, the language input architecture has a user interface to receive in input string of characters, symbols, or other text elements. The input string may include phonetic text and non-phonetic text, as well as one or more languages. The user interface allows the user to enter the input text string in a single edit line without

switching modes between entry of different text forms or different languages. In this manner, the language input architecture offers modeless entry of multiple languages for user convenience (Lee Col. 4 lines 1-17).

Furthermore, Lee teaches mutually dependent probability of two language as well as individual probabilities of one language (Lee Col. 9 lines 58-65), wherein the next characters and sequence of words are predicted (Lee Col. 11 lines 2-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Bahl to incorporate converting a mixed language word sequence to a monolingual word sequence using word equivalence probabilities as taught by Lee to allow for the elimination of user intervention during language translation, wherein well known word prediction techniques (Lee Col. 11 lines 2-17). can be combined to be applicable to the combination of one language from a mixed language document to accommodate the reader of a document that speaks one language better than another (Lee Col. 3 lines 14-35).

Re claims 5, 13, and 19, Bahl teaches the method as claimed in claim 1, further comprising determining by said computing device the word equivalence probabilities (Page 1001 Col. 2).

However, Bahl fails to teach a parallel text corpus that has corresponding expressions in the first language and the at least one other language

Lee teaches limitations that concerns switching modes between two languages in order to input words from the different language into the same text. It is common, for

example, to draft a document in Chinese that includes English words, such as technical terms (e.g., Internet) and terms that are difficult to translate (e.g., acronyms, symbols, surnames, company names, etc.). Conventional word processors require a user to switch modes from one language to the other language when entering the different words. Thus, when a user wants to enter a word from a different language, the user must stop thinking about text input, switch the mode from one language to another, enter the word, and then switch the mode back to the first language. This significantly reduces the user's typing speed and requires the user to shift his/her attention between the text input task and an extraneous control task of changing language modes. Accordingly, there is a need for a "modeless" system that does not require mode switching. To avoid modes, the system should be able to detect the language that is being typed, and then convert the letter sequence to one language or the other, dynamically, on a word-by-word basis (Lee Col. 3 lines 14-35).

Further, Lee teaches a language input architecture converts input strings of phonetic text (e.g., Chinese Pinyin) to an output string of language text (e.g., Chinese Hanzi) in a manner that minimizes typographical errors and conversion errors that occur during conversion from the phonetic text to the language text. The language input architecture may be implemented in a wide variety of areas, including word processing programs, email programs, spreadsheets, browsers, and the like. In one implementation, the language input architecture has a user interface to receive in input string of characters, symbols, or other text elements. The input string may include phonetic text and non-phonetic text, as well as one or more languages. The user

interface allows the user to enter the input text string in a single edit line without switching modes between entry of different text forms or different languages. In this manner, the language input architecture offers modeless entry of multiple languages for user convenience (Lee Col. 4 lines 1-17).

Furthermore, Lee teaches mutually dependent probability of two language as well as individual probabilities of one language (Lee Col. 9 lines 58-65), wherein the next characters and sequence of words are predicted (Lee Col. 11 lines 2-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Bahl to incorporate a parallel text corpus that has corresponding expressions in the first language and the at least one other language as taught by Lee to allow for the elimination of user intervention during language translation, wherein well known word prediction techniques (Lee Col. 11 lines 2-17). can be combined to be applicable to the combination of one language from a mixed language document to accommodate the reader of a document that speaks one language better than another (Lee Col. 3 lines 14-35).

Re claims 6, 14, and 20, Bahl teaches the method as claimed in claim 1, further comprising determining by said computing device a probability of a next word (Page 1002 Col. 2) hypothesis given a base language word history (Page 1001 Col. 2).

However, Bahl fails to teach probabilities of a foreign language given a base language

Lee teaches limitations that concerns switching modes between two languages in order to input words from the different language into the same text. It is common, for example, to draft a document in Chinese that includes English words, such as technical terms (e.g., Internet) and terms that are difficult to translate (e.g., acronyms, symbols, surnames, company names, etc.). Conventional word processors require a user to switch modes from one language to the other language when entering the different words. Thus, when a user wants to enter a word from a different language, the user must stop thinking about text input, switch the mode from one language to another, enter the word, and then switch the mode back to the first language. This significantly reduces the user's typing speed and requires the user to shift his/her attention between the text input task and an extraneous control task of changing language modes. Accordingly, there is a need for a "modeless" system that does not require mode switching. To avoid modes, the system should be able to detect the language that is being typed, and then convert the letter sequence to one language or the other, dynamically, on a word-by-word basis (Lee Col. 3 lines 14-35).

Further, Lee teaches a language input architecture converts input strings of phonetic text (e.g., Chinese Pinyin) to an output string of language text (e.g., Chinese Hanzi) in a manner that minimizes typographical errors and conversion errors that occur during conversion from the phonetic text to the language text. The language input architecture may be implemented in a wide variety of areas, including word processing programs, email programs, spreadsheets, browsers, and the like. In one implementation, the language input architecture has a user interface to receive in input

string of characters, symbols, or other text elements. The input string may include phonetic text and non-phonetic text, as well as one or more languages. The user interface allows the user to enter the input text string in a single edit line without switching modes between entry of different text forms or different languages. In this manner, the language input architecture offers modeless entry of multiple languages for user convenience (Lee Col. 4 lines 1-17).

Furthermore, Lee teaches mutually dependent probability of two language as well as individual probabilities of one language (Lee Col. 9 lines 58-65), wherein the next characters and sequence of words are predicted (Lee Col. 11 lines 2-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Bahl to incorporate probabilities of a foreign language given a base language as taught by Lee to allow for the elimination of user intervention during language translation, wherein well known word prediction techniques (Lee Col. 11 lines 2-17). can be combined to be applicable to the combination of one language from a mixed language document to accommodate the reader of a document that speaks one language better than another (Lee Col. 3 lines 14-35).

Re claims 7, 15, and 21, Bahl fails to teach the method as claimed in claim 1, further comprising using by said computing device a parallel text corpus that has corresponding expressions in the first language and the at least one other language

Lee teaches limitations that concerns switching modes between two languages in order to input words from the different language into the same text. It is common, for example, to draft a document in Chinese that includes English words, such as technical terms (e.g., Internet) and terms that are difficult to translate (e.g., acronyms, symbols, surnames, company names, etc.). Conventional word processors require a user to switch modes from one language to the other language when entering the different words. Thus, when a user wants to enter a word from a different language, the user must stop thinking about text input, switch the mode from one language to another, enter the word, and then switch the mode back to the first language. This significantly reduces the user's typing speed and requires the user to shift his/her attention between the text input task and an extraneous control task of changing language modes. Accordingly, there is a need for a "modeless" system that does not require mode switching. To avoid modes, the system should be able to detect the language that is being typed, and then convert the letter sequence to one language or the other, dynamically, on a word-by-word basis (Lee Col. 3 lines 14-35).

Further, Lee teaches a language input architecture converts input strings of phonetic text (e.g., Chinese Pinyin) to an output string of language text (e.g., Chinese Hanzi) in a manner that minimizes typographical errors and conversion errors that occur during conversion from the phonetic text to the language text. The language input architecture may be implemented in a wide variety of areas, including word processing programs, email programs, spreadsheets, browsers, and the like. In one implementation, the language input architecture has a user interface to receive in input

string of characters, symbols, or other text elements. The input string may include phonetic text and non-phonetic text, as well as one or more languages. The user interface allows the user to enter the input text string in a single edit line without switching modes between entry of different text forms or different languages. In this manner, the language input architecture offers modeless entry of multiple languages for user convenience (Lee Col. 4 lines 1-17).

Furthermore, Lee teaches mutually dependent probability of two language as well as individual probabilities of one language (Lee Col. 9 lines 58-65), wherein the next characters and sequence of words are predicted (Lee Col. 11 lines 2-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Bahl to incorporate using a parallel text corpus that has corresponding expressions in the first language and the at least one other language as taught by Lee to allow for the elimination of user intervention during language translation, wherein well known word prediction techniques (Lee Col. 11 lines 2-17). can be combined to be applicable to the combination of one language from a mixed language document to accommodate the reader of a document that speaks one language better than another (Lee Col. 3 lines 14-35).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)-270-1847. The examiner can normally be reached on 9:30 am - 6:00 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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